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RECORDS CLASSIFICATION FORM FOR REGION V  
RCRA RECORDS

Today's Date: 7/6/16

Site Name: Hamilton Sundstrand

ID Number: ~~ILD~~ 981000417

Date(s) of Documents: \_\_\_\_\_

Type(s) of Document: CA 725

Quantity of Documents: No. of Box(es) \_\_\_\_\_ No. of Folder(s): \_\_\_\_\_

Sensitive: CBI Room \_\_\_\_\_ Enforcement Sensitive (Red Folder) \_\_\_\_\_

Documents can go to Federal Record Center: Yes \_\_\_\_\_ No \_\_\_\_\_  
(Documents from FRC can be recalled in 48-72 hours)

Submitted by: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION

Interim Final 2/5/99

RCRA Corrective Action  
Environmental Indicator (EI) RCRIS code (CA725)

Current Human Exposures Under Control

Facility Name:	Hamilton Sundstrand Corporation Plant 1/2 Facility
Facility Address:	2401 and 2421 11 <sup>th</sup> Street Rockford, Illinois
Facility EPA ID #:	ILD 981000417

1. Has **all** available relevant/significant information on known and reasonably suspected releases to soil, groundwater, surface water/sediments, and air, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been **considered** in this EI determination?

  X   If yes - check here and continue with #2 below.

       If no - re-evaluate existing data, or

       If data are not available skip to #6 and enter "IN" (more information needed) status code.

**BACKGROUND**

**Definition of Environmental Indicators (for the RCRA Corrective Action)**

Environmental Indicators (EI) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EI developed to-date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (ecological) receptors is intended to be developed in the future.

**Definition of "Current Human Exposures Under Control" EI**

A positive "Current Human Exposures Under Control" EI determination ("YE" status code) indicates that there are no "unacceptable" human exposures to "contamination" (i.e., contaminants in concentrations in excess of appropriate risk-based levels) that can be reasonably expected under current land- and groundwater-use conditions (for all "contamination" subject to RCRA corrective action at or from the identified facility (i.e., site-wide)).

**Relationship of EI to Final Remedies**

While Final remedies remain the long-term objective of the RCRA Corrective Action program the EI are near-term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993, GPRA). The "Current Human Exposures Under Control" EI are for reasonably expected human exposures under current land- and groundwater-use conditions ONLY, and do not consider potential future land- or groundwater-use conditions or ecological receptors. The RCRA Corrective Action program's overall mission to protect human health and the environment requires that Final remedies address these issues (i.e., potential future human exposure scenarios, future land and groundwater uses, and ecological receptors).

**Duration / Applicability of EI Determinations**

EI Determinations status codes should remain in RCRIS national database ONLY as long as they remain true (i.e., RCRIS status codes must be changed when the regulatory authorities become aware of contrary information).

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2. Are groundwater, soil, surface water, sediments, or air media known or reasonably suspected to be "contaminated"<sup>1</sup> above appropriately protective risk-based "levels" (applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action (from SWMUs, RUs or AOCs)?

	Yes	No	?	Rationale / Key Contaminants
Groundwater <sup>3</sup>	X			Ongoing monitoring of groundwater conditions are under CERCLA. In some on-site groundwater wells to the west, concentrations of TCE, PCE, vinyl chloride, and cis-1,2-DCE remain above Illinois Class I groundwater quality standards. Active AS/SVE remediation system is in place resulting in contaminant concentrations that are either stable or decreasing. Restricted groundwater use at the site (Environmental Covenant).
Air (indoors) <sup>2</sup>		X		Following the Illinois Tiered Approach to Corrective Action Objectives (TACO) [35 Illinois Administrative Code Part 742] for evaluation of the indoor air inhalation exposure route, Site groundwater COC concentrations in the vicinity of the Site building <sup>5</sup> are below Tier 1 Indoor Inhalation Remedial Objectives [35 IAC 742.Appendix B. Table H]. Site building <sup>5</sup> is constructed with a maintained, concrete slab-on-grade foundation containing several shallow subgrade concrete containment structures.
Surface Soil (e.g., <2 ft)		X		Concrete floor of the portion of the building <sup>5</sup> that was demolished is in place. See attached Figure 1 for the locations of SWMUs and AOCs and Table 1 for a summary of the RCRA closure approach for each SWMU/AOCs.  Reference Documents: Phase I RCRA Investigation and Closure Report (July 19, 2011)/USEPA Letter (December 5, 2011) and Closure Report and Phase I RFI Work Plan (October 14, 2009).
Surface Water		X		Not applicable.
Sediment		X		Not applicable.
Subsurf. Soil (e.g., >2 ft) <sup>4</sup>	X			Subsurface soil at Old Plating Area (AOC 27)- Residual contamination above Remediation Objectives have been addressed through maintenance of an engineered barrier (concrete floor) and implementation of a HASP for construction activities in this area. Concrete floor of the portion of the building <sup>5</sup> that was demolished is in place. See attached Figure 1 for the locations of SWMUs and AOCs and Table 1 for a summary

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of the RCRA closure approach for each SWMU/AOCs.

Reference Documents: Phase I RCRA Investigation and Closure Report (July 19, 2011)/USEPA Letter (December 5, 2011) and Closure Report and Phase I RFI Work Plan (October 14, 2009).

Air (outdoors)

X

Reference Documents: Phase I RCRA Investigation and Closure Report (July 19, 2011)/USEPA Letter (December 5, 2011) and Closure Report and Phase I RFI Work Plan (October 14, 2009).

If no (for all media) - skip to #6, and enter "YE," status code after providing or citing appropriate "levels," and referencing sufficient supporting documentation demonstrating that these "levels" are not exceeded.

If yes (for any media) - continue after identifying key contaminants in each "contaminated" medium, citing appropriate "levels" (or provide an explanation for the determination that the medium could pose an unacceptable risk), and referencing supporting documentation.

X

If unknown (for any media) - skip to #6 and enter "IN" status code.

Rationale and Reference(s):

<sup>1</sup> "Contamination" and "contaminated" describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriately protective risk-based "levels" (for the media, that identify risks within the acceptable risk range).

<sup>2</sup> Recent evidence (from the Colorado Dept. of Public Health and Environment, and others) suggest that unacceptable indoor air concentrations are more common in structures above groundwater with volatile contaminants than previously believed. This is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration necessary to be reasonably certain that indoor air (in structures located above (and adjacent to) groundwater with volatile contaminants) does not present unacceptable risks.

<sup>3</sup> Groundwater- RCRA program has deferred the contaminated groundwater issue to the CERCLA in accordance with the 2008 Consent Decree. Active groundwater remediation is being implemented through systems which remediate source material, provide barriers at the southern and western boundaries, and SVE wells. Groundwater monitoring results of COCs for groundwater (1,1-dichloroethene (1,1-DCE), 1,2-dichloroethane, 1,2-dichloroethene, ethylbenzene, tetrachloroethene (PCE), 1,1,1-trichloroethane (1,1,1-TCA), 1,1,2-trichloroethane (1,1,2-TCA), trichloroethene (TCE), and vinyl chloride) continue to show downward trend in contamination.

<sup>4</sup> Subsurface soil at Old Plating Area (AOC 27)- In 2010, thirty-three soil samples from AOC 27, including one field duplicate, were analyzed for VOCs, metals, pH, total cyanide and soluble fluoride. The borings associated with AOC 27 were completed to a depth of 10.0 ft bgs. Concentrations of PCE,

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TCE, 1,1-DCE and 1,1,1-TCA exceeding Tier I Remediation Objectives were detected in soil samples from several boring locations. In addition, concentrations of arsenic, cadmium, chromium and mercury exceeded their respective Remediation Objectives at one or more locations. **Residual contamination above Remediation Objectives have been addressed through maintenance of an engineered barrier (concrete floor) and implementation of a HASP for construction activities in this area.**

<sup>5</sup> Plant 1/2 was originally an entire building. The western portion of this building was demolished in 2009, leaving behind the concrete floor in place. The facility building housed processes for manufacturing, assembly, and diagnostic testing of aircraft parts and auxiliary equipment. The demolished portion of the building is to the west of the green line shown on Figure 1.

3. Are there **complete pathways** between "contamination" and human receptors such that exposures can be reasonably expected under the current (land- and groundwater-use) conditions?

Summary Exposure Pathway Evaluation Table

Potential Human Receptors (Under Current Conditions)

Contaminated Media	Residents	Workers	Day Care	Construction	Trespassers
Groundwater	No	No	No	No	No
Air (indoors)	No	No	No	No	No
Soil (surface, e.g., <2 ft)	No	No	No	No	No
Soil (subsurface e.g., >2 ft)	No	No	No	No	No
Air (outdoors)	No	No	No	No	No

Instructions for Summary Exposure Pathway Evaluation Table:

1. Strike-out specific Media including Human Receptors<sup>1</sup> spaces for Media which are not "contaminated") as identified in #2 above.
2. Enter "yes" or "no" for potential "completeness" under each "Contaminated" Media -- Human Receptor combination (Pathway).

Note: In order to focus the evaluation to the most probable combinations some potential "Contaminated" Media - Human Receptor combinations (Pathways) do not have check spaces ("\_\_\_"). While these combinations may not be probable in most situations they may be possible in some settings and should be added as necessary.

X<sup>1</sup> If no (pathways are not complete for any contaminated media-receptor combination) - skip to #6, and enter "YE" status code, after explaining and/or referencing condition(s) in-place, whether natural or man-made, preventing a complete exposure pathway from each contaminated medium (e.g., use optional Pathway Evaluation Work Sheet to analyze major pathways).

If yes (pathways are complete for any "Contaminated" Media - Human Receptor combination) - continue after providing supporting explanation.

If unknown (for any "Contaminated" Media - Human Receptor combination) - skip to #6 and enter "IN" status code

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Rationale and Reference(s):

<sup>1</sup>Subsurface soil at Old Plating Area (AOC 27)- Exposure to subsurface soils only possible if excavation occurs on-site. Excavation is not a current activity on-site. Residual contamination above Remediation Objectives have been addressed through maintenance of an engineered barrier (concrete floor) and implementation of a HASP for construction activities in this area. Exposure to groundwater at the site is restricted/prevented by an active Environmental Restrictive covenant. Migration of groundwater off-site is controlled by migration barriers at the southern and western boundaries of the site. An active AS/SVE system extends across the southern property boundary and has resulted in contaminant concentrations that are stable or decreasing.

4. Can the **exposures** from any of the complete pathways identified in #3 be reasonably expected to be **"significant"**<sup>1</sup> (i.e., potentially "unacceptable" because exposures can be reasonably expected to be: 1) greater in magnitude (intensity, frequency and/or duration) than assumed in the derivation of the acceptable "levels" (used to identify the "contamination"); or 2) the combination of exposure magnitude (perhaps even though low) and contaminant concentrations (which may be substantially above the acceptable "levels") could result in greater than acceptable risks)?

\_\_\_\_\_ If no (exposures cannot be reasonably expected to be significant (i.e., potentially "unacceptable") for any complete exposure pathway) - skip to #6 and enter "YE" status code after explaining and/or referencing documentation justifying why the exposures (from each of the complete pathways) to "contamination" (identified in #3) are not expected to be "significant."

\_\_\_\_\_ If yes (exposures could be reasonably expected to be "significant" (i.e., potentially "unacceptable") for any complete exposure pathway) - continue after providing a description (of each potentially "unacceptable" exposure pathway) and explaining and/or referencing documentation justifying why the exposures (from each of the remaining complete pathways) to "contamination" (identified in #3) are not expected to be "significant."

\_\_\_\_\_ If unknown (for any complete pathway) - skip to #6 and enter "IN" status code

Rationale and Reference(s)

<sup>1</sup> If there is any question on whether the identified exposures are "significant" (i.e., potentially "unacceptable") consult a human health Risk Assessment specialist with appropriate education, training and experience

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5. Can the "significant" exposures (identified in #4) be shown to be within **acceptable** limits?

\_\_\_\_\_ If yes (all "significant" exposures have been shown to be within acceptable limits) - continue and enter "YE" after summarizing and referencing documentation justifying why all "significant" exposures to "contamination" are within acceptable limits (e.g., a site-specific Human Health Risk Assessment).

\_\_\_\_\_ If no (there are current exposures that can be reasonably expected to be "unacceptable")- continue and enter "NO" status code after providing a description of each potentially "unacceptable" exposure.

\_\_\_\_\_ If unknown (for any potentially "unacceptable" exposure) - continue and enter "IN" status code

Rationale and Reference(s)

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6. Check the appropriate RCRIS status codes for the Current Human Exposures Under Control EI event code (CA725), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (and attach appropriate supporting documentation as well as a map of the facility):

X YE - Yes, "Current Human Exposures Under Control" has been verified. Based on a review of the information contained in this EI Determination, "Current Human Exposures" are expected to be "Under Control" at the (Hamilton Sundstrand Corporation Plant 1/2 Facility, ILD 981000417, 2401 and 2421 11<sup>th</sup> Street Rockford, Illinois) under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

       NO - "Current Human Exposures" are NOT "Under Control."

       IN - More information is needed to make a determination.

Completed by: (signature) Colleen Olsberg Date 5/31/16  
(print) Colleen Olsberg  
(title) Environmental Health Scientist

Supervisor: (signature) Mike Beedle Date 6/1/16  
(print) Mike Beedle  
(title) Section Chief  
(EPA Region or State) Region 5

Locations where References may be found:

Contact telephone and e-mail numbers

(name) Colleen Olsberg  
(phone #) 312-353-4686  
(e-mail) olsberg.colleen@epa.gov

**FINAL NOTE: THE HUMAN EXPOSURES EI IS A QUALITATIVE SCREENING OF EXPOSURES AND THE DETERMINATIONS WITHIN THIS DOCUMENT SHOULD NOT BE USED AS THE SOLE BASIS FOR RESTRICTING THE SCOPE OF MORE DETAILED (E.G., SITE-SPECIFIC) ASSESSMENTS OF RISK.**



Table 1: Summary of SWMU / AOC Closure Approach and Institutional Controls

SWMU or AOC #	SWMA/AOC Name	RCRA Closure Approach	Closure Request Report/USEPA Concurrence Letter/Other Relevant Document	Institutional Control (1)
SWMU 1	Wastewater Treatment Plant (WWTP)	COIs in Soil < Tier 2 SROs (The investigation of SWMU 1 was used to confirm closure of SWMU 2.)	Phase I RCRA Investigation and Closure Report (July 19, 2011)	Industrial/Commercial Land Use
SWMU 2	Scrubber (Roof)		USEPA Letter (December 5, 2011)	
SWMU 3	Tank Farm (North)	NA - Groundwater Defer to CERCLA	Closure Report and Phase I RFI Work Plan (October 14, 2009)	Industrial/Commercial Land Use
SWMU 4	Tank Farm (South)	NA - Groundwater Defer to CERCLA	Closure Report and Phase I RFI Work Plan (October 14, 2009)	Industrial/Commercial Land Use
SWMU 5	Underground Tank #1	NA - Groundwater Defer to CERCLA	Closure Report and Phase I RFI Work Plan (October 14, 2009)	Within the area of the SWMU #9 which has an engineered barrier.
SWMU 6	Underground Tank #2	Groundwater Deferred to CERCLA  COI in Soil > Tier 1 SROs Installation of Engineered Barrier  During the tank pull in September 2009, side wall and base samples were collected. Exceedances of the IC-IG pathway for benzo(a)anthracene (8.1 mg/kg - maximum), benzo(a)pyrene (8.4 mg/kg - maximum), benzo(b)fluoranthene (10 mg/kg - maximum), and dibenz(a,h)anthracene (1.5 mg/kg).	Closure Report and Phase I RFI Work Plan (October 14, 2009)  UST Removal Letter Report (January 12, 2010)  Phase I RCRA Investigation and Closure Report (July 19, 2011)  USEPA Letter (December 5, 2011)  Note that subsequent review of the closure documents, indicated that an engineered barrier was warranted.	Industrial/Commercial Land Use  Area currently within a secure fenced area. A portion of the SWMU area is covered by a concrete slab and the other portion is covered by a soil berm.  The proposed barrier to be a soil berm 3 feet high covering the lateral extent (22 feet by 22 feet) of the SWMU area.  Placement of permanent corner markers.
SWMU 7	Underground Tank E	Visual inspection, active use and no evidence of a release.	Closure Report and Phase I RFI Work Plan (October 14, 2009)	-
SWMU 8	Underground Tank #32	COIs in Soil < Tier 1 SROs	Phase I RCRA Investigation and Closure Report (July 19, 2011)  USEPA Letter (December 5, 2011)	Industrial/Commercial Land Use
SWMU 9	Plant #2 Drum Storage Area (OSA)	NA - Defer to CERCLA	Closure Report and Phase I RFI Work Plan (October 14, 2009)	Industrial/Commercial Land Use  Engineered Barrier
SWMU 10	Plant #1 Indoor Drum Storage Area	Illinois EPA closure in 1994	Closure Report and Phase I RFI Work Plan (October 14, 2009)	-
SWMU 11	Contaminated Soil Drum Storage Area (2 drums of impacted soil)	Properly containerized, labeled and disposed drums of impacted soil (not a SWMU)	Closure Report and Phase I RFI Work Plan (October 14, 2009)	-
SWMU 12	Aboveground Indoor Storage Tank (TCA Still)	Groundwater Deferred to CERCLA  COI in Soil > Tier 1 SRO Installation of Engineered Barrier  August 2009 Remedial Action Investigation Report and Supplement Remedial Design document indicated an exceedance of the IC-IH pathway for tetrachloroethene (23 mg/kg).	Remedial Action Investigation Report and Supplemental Remedial Design (August 2009)  Closure Report and Phase I RFI Work Plan (October 14, 2009)  Note that subsequent review of the closure documents, indicated that an engineered barrier was warranted.	Industrial/Commercial Land Use  Area currently within a secure fenced area and potential within the zone of influence of the active soil vapor extraction system. The SWMU area is covered by a concrete slab.  The proposed barrier is the existing concrete slab covering the lateral extent (16 feet by 25 feet) of the SWMU area.  Placement of permanent corner markers.
SWMU 13	On-site Groundwater Contamination	NA - Defer to CERCLA	Closure Report and Phase I RFI Work Plan (October 14, 2009)	Industrial/Commercial Land Use
SWMU 14	Waste Oil Drum	Satellite Accumulation Area - not a SWMU	Closure Report and Phase I RFI Work Plan (October 14, 2009)	-
AOC 25	Drum Wash Area	Closure via visual inspection	Closure Report and Phase I RFI Work Plan (October 14, 2009)	-
AOC 26	Old Dichromate Line	COIs in Soil < Tier 2 SROs	Phase I RCRA Investigation and Closure Report (July 19, 2011)  USEPA Letter (December 5, 2011)	Industrial/Commercial Land Use

**Table 1: Summary of SWMU / AOC Closure Approach and Institutional Controls**

SWMU or AOC#	SWMA/AOC Name	RCRA Closure Approach	Closure Request Report/USEPA Concurrence Letter/Other Relevant Document	Institutional Control (1)
AOC 27	Old Plant #1 Plating Area	Tier 2 SROs Installation of Engineered Barrier  Exceedances for Arsenic IC-IG pathway, Cadmium CW-IG pathway, Chromium IC-IH CW-IH CW-IG pathways, Mercury CW-IH pathway. See Figure 2 for a summary of the exceedances.	Phase I RCRA Investigation and Closure Report (July 19, 2011)  USEPA Letter (December 5, 2011)  Note that subsequent review of the closure documents, indicated that an engineered barrier was warranted.	Industrial/Commercial Land Use Groundwater Use Restriction to Non-Potable  Area currently within a secure fenced area. The SWMU area is covered by a concrete slab.  The proposed barrier is to cover the existing concrete slab with asphalt and new concrete (a portion) covering the lateral extent (50 feet by 50 feet) of the SWMU area.  Placement of permanent corner markers.
AOC 28	Plant #1 Sodium Dichromate Line	COIs in Soil < Tier 1 SROs	Phase I RCRA Investigation and Closure Report (July 19, 2011)  USEPA Letter (December 5, 2011)	Industrial/Commercial Land Use
AOC	2000 LUST Incident	NA - Defer to CERCLA	Closure Report and Phase I RFI Work Plan (October 14, 2009)	Industrial/Commercial Land Use
AOC	Acid Drum Storage Area	Underwent Illinois EPA Closure and received final closure approval in 1985.	Closure Report and Phase I RFI Work Plan (October 14, 2009)	-

Notes: Institutional controls at the Site include Groundwater Use Restriction, Industrial/Commercial Land Use, and an Engineered Barrier.

NA = Not Applicable

SRO = Soil Remediation Objective

CERCLA = Comprehensive Environmental Response, Compensation and Liability Act

LUST = Leaking Underground Storage Tank

SWMU = Solid Waste Management Unit

AOC = Area of Concern

COIs = Constituents of Interest

RCRA = Resource Conservation and Recovery Act

1. The following institutional controls apply across the site as record in the Environmental Covenant:

- An industrial/commercial land use designation.

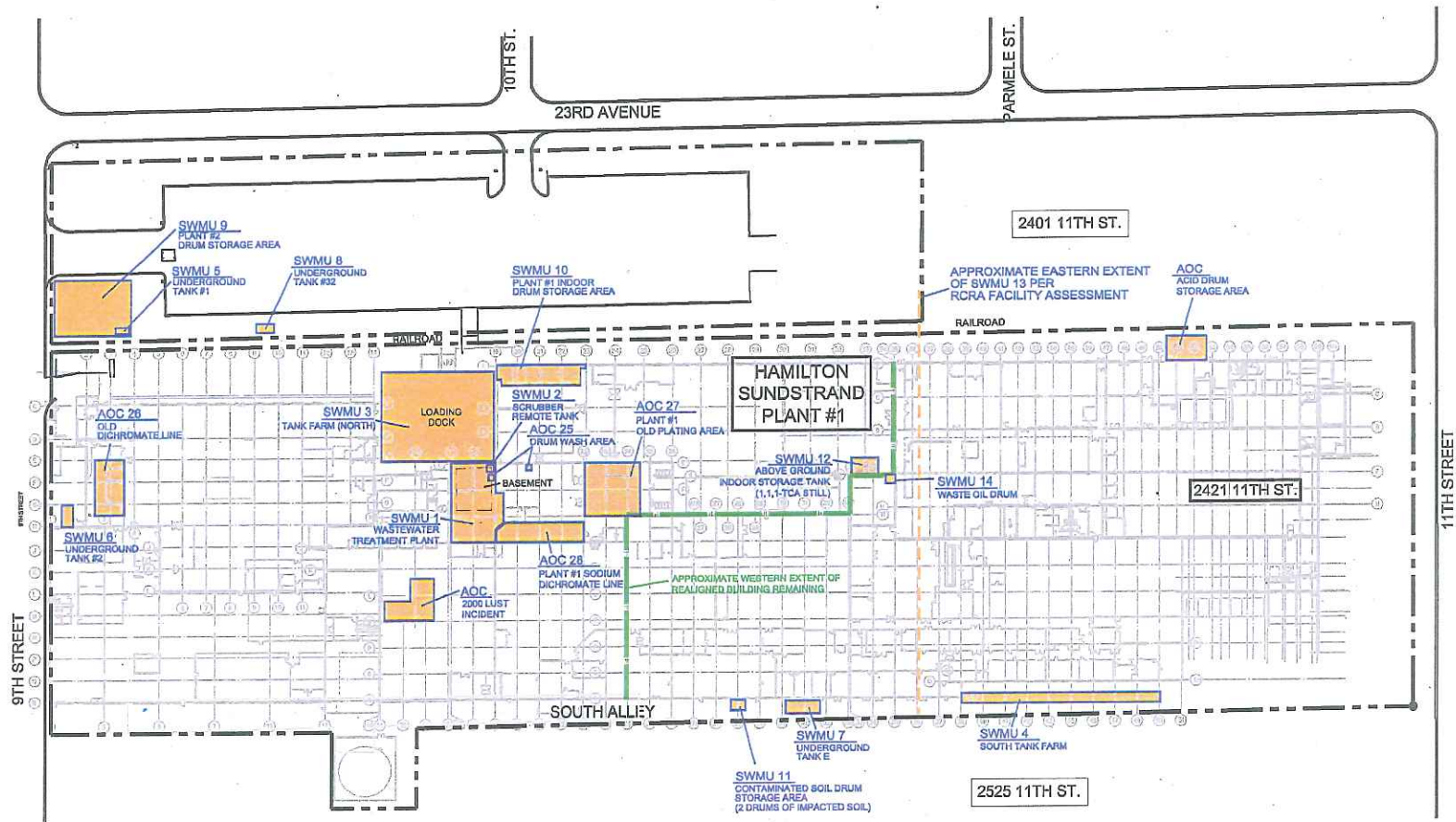
- A groundwater use restriction prohibiting the use of groundwater as a potable water supply.

- Restrictions for handling soil and groundwater generated at the Facility.

- Construction (where necessary) and maintenance of engineered barriers to restrict exposure to underlying soils in the required areas.

- Implementation of the construction worker health and safety plan, which adequately protects construction workers from being exposed through the inhalation and ingestion exposure routes to elevated concentrations of constituents of concern (COCs) in soil.





**SOURCE:**

Stantec, 2009, Closure Report and Phase I  
RFI Work Plan, Rockford, Illinois, October 2009.

**AECOM**

HAMILTON SUNDSTRAND CORPORATION PLANT 1/2 FACILITY 2401 AND 2421 11TH STREET, ROCKFORD, IL		SWMUs AND AOCs MAP	
DATE: 09/03/15	DRAWN: JG	PROJECT NO. 60436824.4330	FIGURE 1



